English

- (51) International Patent Classification7: C07D 295/06, A61K 31/415
- HOLK SU415

(21) International Application Number: PCT/US2004/019540

- (22) International Filing Date: 17 June 2004 (17.06.2004)
- (26) Publication Language: English
- (30) Priority Data:

60/480,045

(25) Filing Language:

20 June 2003 (20.06.2003) US

- (71) Applicant (for all designated States except US): ARENA PHARMACEUTICALS, INC. [US/US]; 6166 Nancy Ridge Drive, San Diego, CA 92121-3223 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): SMITH, Brinn [US/US]; 13182 Mesa Crest Place, San Diego, CA 92129 (US). TSAI, James [US/US]; 2686 Dietrich Drive, Tustin, CA 92782 (US). CHEN, Rita [US/US]; 11098 Caminito Alvarez, San Diego, CA 92126 (US).
- (74) Agents: SPRUCE, Lyle, W. et al.; Arena Pharmaceuticals, Inc., 6166 Nancy Ridge Drive, San Diego, CA 92121-3223 (US).

- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, AG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, DI, LI, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PI, PF, RO, RU, SC, SD, SE, GS, KS, LS, SY, TI, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TI, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: N-PHENYL-PIPERAZINE DERIVATIVES AND METHODS OF PROPHYLAXIS OR TREATMENT OF $5 \mathrm{HT}_{2C}$ RECEPTOR ASSOCIATED DISEASES

(57) Abstract: The present invention relates to certain substituted N-phenyl-piperazine derivatives of Formula: (1) that are modulators of the 5HT₂ receptor. Accordingly, compounds of the present invention are useful for the prophylaxis or treatment of 5HT₂. Teceptor associated diseases or disorders, such as, obesity, Alzheimer Disease, erectile dysfunction and related disorders.